

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking Regarding
Broadband Infrastructure Deployment and to
Support Service Providers in the State of
California.

Rulemaking 20-09-001

**REPLY COMMENTS OF COMCAST PHONE OF CALIFORNIA, LLC (U-5698-C)
TO ASSIGNED COMMISSIONER'S RULING**

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September 21, 2021

For Comcast Phone of California, LLC

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Comcast Phone of California, LLC (U-5698-C) and its affiliates that provide broadband service in California (“Comcast”) respectfully submit this reply to comments filed by other parties in response to the *Assigned Commissioner’s Ruling* (“Ruling”) issued August 6, 2021 in the above-captioned docket and the Assigned Administrative Law Judge’s August 20, 2021 ruling extending the deadline for filing reply comments until September 21, 2021.

I. INTRODUCTION AND GENERAL RECOMMENDATIONS

Numerous opening comments from a wide range of parties show great interest in this proceeding and a variety of perspectives on how California should spend its \$3.25 billion investment in a statewide middle-mile broadband network (the “Middle-Mile Network”). While they all reflect the widely shared goal of making high-quality broadband available to all Californians, these comments must be viewed in light of the Commission’s limited role under Senate Bill (“SB”) 156 to recommend locations and priority routes for the Middle-Mile Network.¹ On that core issue, there is broad agreement that the state should prioritize middle-mile routes that enable last-mile connections in unserved areas, which are predominantly in rural and remote parts of California. A few parties’ proposals to shift the focus from unserved rural areas toward

¹ See Gov’t Code § 11549.54(a).

overbuilding in cities and suburbs, speculative “future-proofing,” or otherwise expanding middle-mile capacity in areas that already have access to robust broadband are unhelpful and would undermine the intent of the Legislature and waste public funds. Other parties’ suggestions to prioritize Middle-Mile Network routes based on household income, race or other demographics, alleged historical redlining practices, broadband adoption rates, social justice goals, or other factors not contemplated in SB 156 would likewise conflict with legislative intent and could leave behind truly unserved areas of California.

There also is broad agreement that the Commission should revisit its proposed map of “Anchor Build Fiber Highways” to correct errors and omissions and to eliminate duplicative routes through major population centers. Various parties suggest more useful and cost-effective Middle-Mile Network routes using a more targeted combination of country and rural roads and existing infrastructure where available. Before issuing its staff report, the Commission should review and correct its data and issue a revised map based on service availability at the 25/3 Mbps threshold specified in SB 156. Interested parties including Comcast and other ISPs should then be permitted to comment on whether they already provide service in areas targeted for new middle-mile deployment.

Many other issues discussed in opening comments may raise valid public policy questions but are either premature to decide at this stage, beyond the scope of the Commission’s statutory role, or already being considered in other dockets or phases of this proceeding. Comcast may address some of those issues in response to the Assigned Administrative Law Judge’s September 9, 2021 ruling seeking further comment on additional topics. In general, however, Comcast believes this phase should be targeted toward identifying priority routes for the Middle-Mile Network without expanding into an unproductive catch-all for other broadband deployment,

adoption, or digital equity issues. The Commission’s focus should remain on preparing the staff report required under SB 156 while coordinating with the Office of Broadband and Digital Literacy (the “Office”) and Third-Party Administrator (the “Administrator”) on implementation and operational considerations.

II. RESPONSES TO QUESTIONS

1. **Identifying Existing Middle-Mile Infrastructure:** Attachment A provides a list of the state routes proposed for the statewide open access Middle-Mile Network, referred to as the “Anchor Build Fiber Highways.” These routes may also be viewed on an ArcGIS map, which can be found [here](#).

- What routes, if any, should be modified, removed from consideration, or revised? Provide an explanation for these suggestions.
- Are there existing middle-mile routes that are open access, with sufficient capacity, and at affordable rates on the county highway routes listed in Attachment A?
- In the context of these comments, what is sufficient capacity and affordable rates?
- For routes that are identified as being open access, with sufficient capacity, and at affordable rates, how should the Commission verify these claims (e.g., should Communications Division send a data request for service term sheets, rates, approximate dark fiber, lit fiber, and conduit capacity, etc.)? Are there any other criteria that should be used to verify these claims?

COMCAST’S REPLY

Industry commenters, as well as several cooperatives and public-private partnerships, have identified extensive middle-mile broadband infrastructure already deployed throughout much of California. AT&T, for example, provides a map showing how it has “deployed fiber that blankets its ILEC territory as well as fiber deployed outside its territory.”² Lumen “has an extensive

² AT&T Comments at 2 and Attachment 1.

existing fiber network throughout California from which the state, or the [Administrator], could purchase IRUs” and also provides a public route map.³ Charter includes “an illustrative list of additional communications infrastructure providers whose middle-mile fiber routes provide connectivity to highly-connected urban areas throughout California.”⁴

These offerings are not limited solely to privately owned networks. Mono County and Inyo County both reference the Digital 395 network operated by the California Broadband Cooperative with funding from the federal Broadband Technology Opportunities Program (“BTOP”) and the California Advanced Services Fund (“CASF”). This network already “delivers competitively priced, carrier grade service without capacity constraints to government, education, and medical anchor institutions . . . plus backhaul to numerous last-mile providers” in portions of both counties.⁵ Consequently, “a portion of the [proposed Anchor Build Fiber Highways map] may not need to be constructed, potentially freeing up funds that could be used to extend the new network to reach [other specified] communities and organizations.”⁶

Some of the above networks may conform to the Commission’s definition of “open access” more than others.⁷ But that largely semantic debate should not distract from the task at hand: identifying where new public middle-mile infrastructure will provide the greatest benefit to

³ Lumen Comments at 3.

⁴ Charter Comments at 16 and Attachment B.

⁵ Mono County Comments at 2.

⁶ Inyo County Comments at 2.

⁷ Cf. AT&T Comments at 9 (stating that “AT&T’s transport offerings, including middle mile, meet this [open access] definition because many different types of entities have access to AT&T’s fiber network”); Charter Comments at 15 (noting that some communications infrastructure providers “are certificated public utilities, and so, by law, their services are non-discriminatory to the extent the services are offered as a regulated service); Comcast Comments at 12 (noting that Comcast does not provide open-access infrastructure within the meaning of SB 156 and discussing negative impacts of open-access requirements on private investment).

unserved Californians. As Cox observes, “existing wholesale providers may have ‘middle-mile’ infrastructure available in or near some but not all of the areas shown on the Commission’s map, even if those providers do not necessarily advertise or offer their services as being ‘middle-mile’ or being available as ‘open access.’”⁸ From a practical perspective, the vast majority of commenters agree that it would not make sense or be a wise use of public funds to duplicate middle-mile facilities and services where they are already available.⁹

For its part, Comcast has invested hundreds of millions of dollars in new fiber transmission facilities and associated network equipment to support the robust and reliable data services that larger businesses and carrier-customers demand. Although the specific infrastructure and services that fit within the Commission’s definition of “middle-mile” have not been precisely established in this proceeding,¹⁰ Comcast offers a variety of options¹¹ for high-capacity connectivity in California at competitive rates, including:

- Ethernet transport services, which provide point-to-point connectivity between or among multiple business locations and secure access to cloud and data center resources over dedicated fiber connections;

⁸ Cox Comments at 4.

⁹ See, e.g., California Emerging Technology Fund (“CETF”) Comments at 5-6 (noting that projects such as Digital 395 built with American Recovery and Reinvestment Act (“ARRA”) funds are subject to federal open-access requirements, and “the State need not build middle-mile in these existing open access middle-mile corridors”); AT&T Comments at 3 (“Given [AT&T’s] robust fiber network and the other fiber networks in California, the vast majority of the state highways shown on the Anchor Highways Map should be eliminated as part of the state’s buildout of a middle-mile network”); Small LECs Comments at 2 (expressing “concern[] that the Commission intends to recommend construction of middle-mile network that will substantially overbuild existing infrastructure”).

¹⁰ See Ruling at 4 (stating only that “‘Middle Mile’ refers to the high-capacity fiber-optic cables that traverse long distances (e.g., 10s-100s of miles) to connect communities to the Internet backbone” without addressing the specific business data or other commercially available communications services that would fit this definition).

¹¹ See Comcast Business, Data Networking, <https://business.comcast.com/enterprise/products-services/data-networking> (describing Comcast’s range of enterprise networking solutions).

- Backhaul services, which connect wireless towers to carrier networks using high-capacity Ethernet and fiber lines to satisfy increasing demands for mobile data; and
- Wavelength services, which provide high-speed bandwidth options of 10 Gbps and 100 Gbps in key metro areas.

In Comcast’s experience – and as confirmed by other commenters (and noted above) – many other commercial providers offer these and other types of middle-mile network services throughout large portions of California in a highly competitive marketplace.¹² In light of these competitive options, the Commission should revise its proposed highway route map based on publicly-available data regarding existing middle-mile network availability. Instead of prioritizing major highway corridors and population centers, the map should focus on more remote and rural areas that currently lack the infrastructure necessary to provide high-quality broadband to homes and businesses.¹³

Commission and Federal Communications Commission (“FCC”) data showing near-ubiquitous availability of high-speed last-mile broadband connections throughout urban areas of California also support changes in the highway route map to reach more areas that do not have

¹² See AT&T Comments at 9 (stating that “AT&T has deployed fiber middle-mile facilities throughout its ILEC service area and even beyond,” and that “[m]ajor competitors have blanketed those same areas with competing fiber facilities”); Charter Comments at 12 (observing that “[t]he ecosystem of middle-mile network provision in . . . highly-connected urban areas would likely sustain growing broadband needs for years to come, and so meet none of [SB 156’s] characteristics for priority middle-mile development”); Lumen Comments at 3 (noting that Lumen “can provide a map [of its network] with more granular location information upon request, but would need to do so on a confidential basis due to security and competitive concerns”).

¹³ See California Broadband Cooperative Comments at 4 (stating that “following the state highway map would lead to an inefficient network design and higher construction costs,” and that “remote dirt roads, county roads, and existing conduit exchanges [would] be more compatible with lower costs and construction safety”); LCB Communications & South Valley Internet Comments at 3 (“Laterals off of the main build or alternative routes on County roads will provide middle-mile infrastructure where most needed.”); San Diego Association of Governments (“SANDAG”) Comments at 5 (urging the Commission to “consider leveraging public infrastructure beyond the state highway system like County and tribal roads, transit and rail right of ways, and public utility right of way projects to maximize use of public funds in areas of greatest need”).

such services. As noted previously, *95 percent* of California households have access to fixed broadband at 100 Mbps download speeds, according to Commission data.¹⁴ And at the 25/3 Mbps speed threshold, nearly *99 percent* have access to fixed, terrestrial broadband, according to FCC data as of June 2020.¹⁵ Consistent with SB 156 and with U.S. Treasury regulations for broadband projects using Coronavirus Fiscal Recovery Funds, the primary objective for the Middle-Mile Network must be to enable last-mile connections to those households and businesses that still lack service, with first priority to those unserved at 25/3 Mbps.¹⁶ As Charter observes, this analysis should target “locations without access to existing middle mile networks, low availability rates, and for which privately-funded network build-out is unlikely because of low population density and challenging terrain.”¹⁷ The Commission’s highway route map should be redrawn to reach those locations, which would produce a narrower, more targeted set of recommendations for Middle-Mile Network funding.

2. Priority Areas: Federal funding must be encumbered and spent in a limited time period. Additionally, unserved and underserved areas of the state are in substantial need of broadband infrastructure investment.

- **Is it reasonable to assume counties with a disproportionately high number of unserved households (e.g., 50% or more unserved at 100 Mbps download) are areas with insufficient middle-mile network access?**
- **What other indicators, if any, should the Commission use to identify priority statewide open-access middle-mile broadband**

¹⁴ See Comcast Comments at 1 (citing Ruling, Attachment 1).

¹⁵ See FCC Broadband Map, Fixed Broadband Deployment, California, https://broadbandmap.fcc.gov/#/area-summary?version=jun2020&type=state&geoid=06&tech=acfow&speed=25_3&vlat=37.41896076143145&vlon=-119.30660699999999&vzoom=4.740325157867542.

¹⁶ See Gov’t Code § 11549.54(d) (directing the Commission to “prioritize locations that enable last-mile connections to residences unserved by 25 mbps downstream and 3 mbps upstream”); 31 C.F.R. § 35.3(3) (defining unserved and underserved households and businesses); *id.* § 35.6(e)(2) (outlining eligible broadband infrastructure uses for Coronavirus Fiscal Recovery Funds).

¹⁷ Charter Comments at 11.

network locations (*i.e.*, built expeditiously, areas with no known middle-mile network access, regions underserved by middle-mile networks, regions without sufficient capacity to meet future middle-mile needs)?

COMCAST’S REPLY

As several commenters note, SB 156 requires the Commission to prioritize network routes based on a 25/3 Mbps threshold for unserved areas, not the 100 Mbps metric proposed in the Ruling.¹⁸ A 25/3 Mbps threshold is likewise required under Treasury rules and guidance for broadband projects using Coronavirus Fiscal Recovery Funds.¹⁹ The Commission may not disregard these requirements.

Proposals to use different speed metrics or other policy preferences – particularly aspirational goals such as ubiquitous symmetrical and/or gigabit speeds for end users – have no basis in the statute and would divert public funding away from the most unserved areas of California. The Electronic Frontier Foundation (“EFF”), for example, implausibly claims that new fiber-optic deployment in served areas is not really “overbuilding,” but merely “replacing . . . older technologies with 21st century, future-ready connectivity” – ignoring multi-modal competition and the advanced and upgradable broadband networks that already pass the vast majority of California households.²⁰ The Utility Reform Network (“TURN”) likewise misses the mark by arguing that

¹⁸ See Gov’t Code § 11549.54(d) (directing the Commission to “prioritize locations that enable last-mile connections to residences unserved by 25 mbps downstream and 3 mbps upstream”); AT&T Comments at 17; Charter Comments at 18; Cox Comments at 2-3; Rural County Representatives of California (“RCRC”) Comments at 4.

¹⁹ U.S. Treasury, *Coronavirus State and Local Fiscal Recovery Funds FAQs* § 6.5 (July 19, 2021), <https://home.treasury.gov/system/files/136/SLFRPFAQ.pdf> (requiring that broadband infrastructure projects be “designed to serve unserved or underserved households and businesses, defined as those that are not currently served by a wireline connection that reliably delivers at least 25 Mbps download speed and 3 Mbps of upload speed”).

²⁰ EFF Comments at 6; *see also id.* at 4 (claiming that “obvious criteria” for prioritizing Middle-Mile Network routes “include the availability of symmetrical services exceeding 100/100 Mbps and the availability of symmetrical gigabit residential services and symmetrical multi-gigabit business class services”).

locations should not be deemed adequately served “unless the infrastructure is ‘future proof,’ including the ability to accommodate future interconnection and flexibility to adapt to new services that may not even be available today.”²¹ But by focusing on speculative capacity enhancements where high-quality broadband is already widely available, these parties not only seek to disregard the express direction of SB 156 and the Treasury funding rules – they also ignore the disservice their approach would do to parts of California that still lack the infrastructure for *any* fixed terrestrial broadband connectivity. Those areas should be the highest priority, and thus should be first in line to benefit from new government broadband funding. Other proposals to prioritize Middle-Mile Network routes based on broadband adoption rates;²² “historical redlining maps” with no bearing on current network deployment;²³ “equity and impact” based on household income and demographics;²⁴ or various other “values outlined” in the Commission’s Environmental and Social Justice Action Plan²⁵ are even farther afield and lack any basis in state or federal law, as well as being unmoored from any real-world gaps in network availability.

Notably, however, a broad array of industry, government, and public interest commenters from across the state disagree with the Ruling’s proposal to prioritize network routes at the county level and support a more granular geographic unit, as Comcast proposed in its opening comments.²⁶ As Southern California Edison Company (“SCE”) explains, many California counties “are very large and have a mix of well-served urban and suburban areas, in addition to

²¹ TURN Comments at 3.

²² Greenlining Institute Comments at 4; California Community Foundation Comments at 13.

²³ CforAT Comments at 3-4.

²⁴ Los Angeles County Comments at 5-6.

²⁵ Cal Advocates Comments at 3.

²⁶ *See* Comcast Comments at 16-17.

underserved rural and remote areas.”²⁷ Consequently, “[a]ssessing need at the county level may cause a county with a large well-served urban population to obscure a smaller but significant unserved rural population.”²⁸ The Connected Capital Area Broadband Consortium (“CCABC”) likewise states that “[a]ggregating unserved households at [the] County level might not reflect and help to identify high priority areas for middle mile deployment,” including unserved areas within counties where the overall proportion of unserved households is less than 50 percent.²⁹ The Utility Consumers’ Action Network (“UCAN”) agrees that “it is critically important to examine deployment at an area that is sufficiently granular so as to be meaningful, and . . . such analysis should occur at a level more granular than at a county-wide level.”³⁰ And as USTelecom notes, “[t]he mapping the Commission has already done is robust, and there seems to be little reason to find a shortcut using county percentages.”³¹ For all of these reasons, there is broad consensus that a more targeted analysis of households unserved at the census-designated place (“CDP”), census tract, or even census block level would more accurately identify unserved areas with the greatest need for access to the Middle-Mile Network, and thus help target funding to the areas that are the express priority of all the relevant statutory and regulatory authorities.

Relatedly, many parties also agree with a tiered approach to Middle-Mile Network deployment, whereby the “worst first” areas receive the highest priority before funds are allocated to other network routes through areas with a much lower proportion of unserved households.³² As

²⁷ SCE Comments at 9-10.

²⁸ *Id.*

²⁹ CCABC Comments at 6. CCABC therefore “recommends more geographical size granularity, including Census Tract or Census Block Group size units.” *Id.*

³⁰ UCAN Comments at 4.

³¹ USTelecom Comments at 4.

³² Charter Comments at 2; *see also* Cox Comments at 3; RCRC Comments at 4; Yurok Tribe Comments at 7-8.

CETF comments, “the overriding criteria for prioritizing State investments in government-owned middle-mile networks [should be] to deploy last-mile infrastructure to the hardest-to-reach unserved households.”³³ And despite its emphasis on speculative “future proofing,” TURN also acknowledges that “[f]or the regions that have some middle mile but lack sufficient capacity to reach future middle mile needs, the Commission should consider these areas only after it considers areas with no middle mile.”³⁴

The Commission should reject contrary arguments from well-served municipalities such as Los Angeles and San Francisco that its staff report should prioritize Middle-Mile Network routes in “dense urban areas”³⁵ or focus on unrelated issues such as upload speeds or inside wiring.³⁶ It bears emphasis that any remaining gaps in broadband availability in populated areas generally have little or nothing to do with a lack of *middle-mile* infrastructure, and instead are almost entirely related to distinct factors that limit last-mile deployment – a matter for a different funding project.³⁷ Proposals to begin with Middle-Mile Network deployment in major cities and highway corridors and only then reach more remote unserved areas have the legislative priorities precisely backward, and would not result in new last-mile connections where they are needed most. This is not the final bite of the apple for broadband-related issues and buildout funding, and the

³³ CETF Comments at 9.

³⁴ TURN Comments at 8.

³⁵ Los Angeles County Comments at 4.

³⁶ City and County of San Francisco Comments at 2.

³⁷ See Charter Comments at 9 (explaining that unserved households in Los Angeles County generally fall into two categories: (1) “remote areas of the County with challenging terrain . . . that could be served with support from public funding,” and (2) “households in more densely-populated areas in which ISPs have faced connection challenges because of barriers to last-mile deployment from property owners, utility pole owners, and local permitting agencies”).

Commission should resist efforts to shoehorn all such issues into this middle-mile-focused proceeding.

III. OTHER ISSUES

While generally outside the scope of the Commission’s staff report, Comcast must correct the record on a few other points:

- Comcast appreciates the Public Advocates Office’s reference to Internet Essentials as a high-speed broadband option for low-income Californians.³⁸ However, it is not accurate that Internet Essentials provides service at 25/3 Mbps. In February 2021, Comcast increased speeds to 50/5 Mbps for all new and existing Internet Essentials customers at no additional fee. Since it launched in 2011, Internet Essentials has connected a cumulative total of more than 10 million people – including 1.4 million in California – to the Internet at home, most for the first time.
- A few other commenters claim that large portions of Comcast’s California service area are “unserved” or otherwise lack access to broadband based on misleading data and inapposite comparisons. For example, Santa Clara County asserts that 100,000 of its approximately 1.9 million residents have no access to broadband, and 130,000 residents have access only to mobile broadband, all based on extrapolations from *adoption* data and the average number of members in a household.³⁹ In fact, both Commission and FCC data show that Santa Clara County is almost universally served at 25/3 Mbps and even at 100 Mbps downstream.⁴⁰ Whether county residents choose to adopt available broadband services raises a separate set of issues with no bearing on priority routes for the Middle-Mile Network. Similarly, San Francisco claims that some of its residents are actually unserved by broadband because of a lack of adequate inside wiring in multi-tenant buildings—another issue that plainly has nothing to do with Middle-Mile Network capacity or routing.⁴¹ The Commission should give no weight to these misplaced arguments.

³⁸ See Cal Advocates Comments at 11.

³⁹ Santa Clara County Comments at 1-2.

⁴⁰ See Ruling, Attachment 1 at 2 (indicating that only 2.9 percent of households in Santa Clara County are unserved at 100 Mbps downstream); FCC Broadband Map, Santa Clara County, CA, https://broadbandmap.fcc.gov/#/area-summary?version=jun2020&type=county&geoid=06085&tech=acfow&speed=25_3&vlat=37.189385967364416&vlon=-121.70541550000002&vzoom=8.494658135263983 (showing fixed terrestrial broadband at 25/3 Mbps available to 100 percent of County households, with 98 percent of households served by three or more providers at that speed).

⁴¹ City and County of San Francisco Comments at 2.

IV. CONCLUSION

The Commission should focus on its statutory mandates under SB 156 to identify priority Middle-Mile Network routes to enable new last-mile connections in unserved areas of California. The Commission should then collaborate with the Office and the Administrator to implement the network consistent with legislative intent. While some parties attempt to redirect this phase of the proceeding toward other issues and policy goals, those unfocused and unproductive recommendations should not divert attention and resources away from the Commission's core responsibilities.

Respectfully submitted,

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For Comcast Phone of California, LLC

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